IN THE CLAIMS:

Please cancel claims 1-3, 6-8, 10-12, 16 and 19 without prejudice or disclaimer of the subject matter recited therein.

Please amend the claims 4 and 15 as follows:

1-3. (Canceled)

4. (Currently Amended) A method ~~according to claim 1~~ of image compression, said method comprising the steps of :

providing digital image data in a computer-readable format, said digital image data including data on values and coordinates for a plurality of pixels;

selecting a region of interest of an image represented by said digital image data;

sorting and prioritizing said digital image data according to at least two priority categories, with digital image data corresponding to the region of interest having a higher priority than digital image data corresponding to areas outside of the region of interest; and

transmitting said sorted and prioritized digital image data to a remote location, with the digital information data corresponding to the region of interest being transmitted with higher priority than the areas outside of the region of interest, wherein said sorting and prioritizing of said digital image data comprises shifting bits of transform coefficients corresponding to the digital image data by a predetermined amount, said predetermined amount of corresponding to a desired scale-up rate for reconstruction of the region of interest.

5. (Original) A method for encoding and decoding an image, said method comprising the steps of:

providing digital image data in a computer-readable format, said digital image data including data on values and coordinates for a plurality of pixels;

sorting said digital image data according to a mathematical sorting protocol, said digital image data being sorted and prioritized according to a predetermined prioritization formula;

transmitting said sorted data to a receiver, and repeating said sorting and transmitting until a partial reconstructed image appears on a display at the receiver;

selecting a region of interest based upon said partial reconstructed image;

transmitting data from said receiver to a computer transmitting data identifying the selected region of interest;

modifying the sorting of the digital image data based upon the selected region of interest, wherein digital image data corresponding to the region of interest is sorted and prioritized to have a higher priority than digital image data corresponding to areas outside of the region of interest; and

transmitting said modified sorted and prioritized data to the receiver, with said region of interest being transmitted with higher priority than the areas outside of the region of interest.

6-8. (Canceled)

9. (Original) A system for encoding and decoding an image, said system comprising:

input means for inputting digital image data in computer-readable format with the digital image data including data on values and coordinates for a plurality of pixels for an image;

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sorting means for sorting said digital image data according to a mathematical sorting protocol, said digital image data being sorted and prioritized by said sorting means according to a predetermined prioritization formula;

transmitting means connected to said sorting means for transmitting said sorted data, wherein said sorting means repeats a sorting of said digital image data and said transmitting means repeats the transmission of said data;

receiving means for receiving said transmitted data from said transmitting means, wherein said transmitted data, said receiving means including a display means thereupon, said display means displaying said transmitted data as a partial reconstructed image during said transmission;

selecting means connected to said receiving means for selecting a region of interest of said partial reconstructed image;

region-of-interest transmitting means for transmitting data corresponding to said selected region-of-interest to said sorting means,

wherein said sorting means modifies the sorting of the digital image data based upon the data corresponding to the selected region of interest, wherein digital image data corresponding to the selected region of interest is sorted and prioritized by said sorting means to have a higher priority than digital image data corresponding to areas outside of the selected region of interest, and wherein said transmitting means transmits said modified sorted and prioritized data to the receiving means, with said selected region of interest being transmitted with a higher priority than areas outside of the region of interest.

10-12. (Cancelled)

13. (Original) A computer program embodied on a computer readable medium, said computer program controlling a general purpose computer to perform the steps of:

displaying digital image data on a display, said digital image data including data on values and coordinates for a plurality of pixels;

sorting said digital image data according to a mathematical sorting protocol, said digital image data being sorted and prioritized according to a predetermined prioritization formula;

transmitting said sorted data to a receiver, and repeating said sorting and transmitting until a partial reconstructed image appears on a display at the receiver;

selecting a region of interest based upon said partial reconstructed image;

transmitting data from said receiver to a computer transmitting data identifying the selected region of interest;

modifying the sorting of the digital image data based upon the selected region of interest, whereby digital image data corresponding to the region of interest is sorted and prioritized to have a higher priority than digital image data corresponding to areas outside of the region of interest; and

transmitting said modified sorted and prioritized data to the receiver, with said region of interest being transmitted with higher priority than the areas outside of the region of interest.

14. (Original) A method of image compression, said method comprising the steps of:

providing digital image data in a computer-readable format, said digital image data including data on values and coordinates for a plurality of pixels;

sorting and prioritizing said digital image data according to a mathematical sorting protocol, said digital image data being sorted and prioritized according to a predetermined prioritization formula;

transmitting said sorted data to a receiver, and repeating said sorting and transmitting as the image data is transmitted to the receiver;

selecting a region of interest of said digital image data;

modifying the sorting of the digital image data based upon the selected region of interest, wherein digital image data corresponding to the region of interest is sorted and prioritized to have a higher priority than digital image data corresponding to areas outside of the region of interest; and

transmitting said modified and sorted prioritized data to the receiver, with said region of interest being transmitted with higher priority than the areas outside of the region of interest.

15. (Currently Amended) A method of image compression ~~as recited in claim 1~~, said method comprising the steps of:

providing digital image data in a computer-readable format, said digital image data including data on values and coordinates for a plurality of pixels;

selecting a region of interest of an image represented by said digital image data;

sorting and prioritizing said digital image data according to at least two priority categories, with digital image data corresponding to the region of interest having a higher priority than digital image data corresponding to areas outside of the region of interest; and

transmitting said sorted and prioritized digital image data to a remote location, with the digital information data corresponding to the region of interest being transmitted with higher priority than the areas outside of the region of interest, wherein said step of transmitting said sorted and prioritized digital image data to the remote location includes transmitting the sorted and prioritized digital image data onto an internet, wherein said remote location is a location on the internet, wherein said method further comprises the step of reconstructing the transmitted digital image data at the remote location, said step of reconstructing comprising the step of decoding the sorted and prioritized digital image data, wherein the region of interest is

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reconstructed at a faster rate than digital image data corresponding to areas outside of the region of interest, said faster rate being provided by said sorting and prioritizing of said digital image data corresponding to the region of interest.

16. (Canceled)

17. (Original) A method for encoding and decoding an image as recited in claim5, wherein said step of transmitting said sorted data includes transmitting said sorted data onto a network, wherein said receiver is a receiving computer on said network, and wherein said step of selecting the region of interest is performed at said receiving computer.

18. (Original) A method for encoding and decoding an image as recited in claim17, wherein said network is an internet network.

19. (Canceled)

20. (Original) A system for encoding and decoding an image as recited in claim9, wherein said transmitting means transmits said sorted data onto a network, and wherein the receiving means is a receiving computer on said network.